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United States
Circuit Court of Appeals
FOR THE NINTH CIRCUIT

FRANK P. SNOW, et al.,
Appellants,
vs.
KELLAR-THOMASON COMPANY,
Appellee. }

APPELLEE'S BRIEF

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Appellee takes the liberty of suggesting the following extracts from the reporter's notes of Judge Van Fleet's decision as containing as full and clear an exposition of complainant's case in the lower Court as can very well be put in words:

"The whole question here is one of novelty.
Does the device disclose invention? * * *

Now, the line, in any art, which divides invention from mere mechanical improvement is a

shadowy one and uncertain, and it is made more uncertain frequently because of the difference in the history of different arts. What would be invention in one art would not be invention in another, by reason of the history of the latter art. * * *

And I may say in passing, on the question of the suggested simplicity of the change that has been produced here, that that is no indictment against invention. It has been held and reiterated that simplicity in itself is rather a virtue than otherwise. A thing does not have to be complicated in order to give one the benefit of a change as involving invention. It may be apparently the simplest thing in the world. * *

Now, here we have an art involved in this case which has not much history behind it; that is, I mean the particular field of the art we are dealing with. It has only had a history of a few years, and that a local one. And yet we find that in the progress of that art, although in its youth, there has been disclosed an effort from the very first to accomplish by some simple and efficient means what the plaintiff's device here admittedly does. We find that all sorts of means and methods have been resorted to to secure in a safe and efficient way to the end of the pipe, where pressure is bound to come, valves and gates such as are involved here. It is true that we find in the art the use—and it is old, of course, very old—of cementitious filling for the

joints in laying pipe lines. But I think the history of the art disclosed quite distinctly that that element has not been used for the purpose which the plaintiff's device disclosed. It was used largely, if not entirely for another purpose. It was used to make perfect joints, water-tight joints,—coupled, of course necessarily, with the effect that would follow the use of most any sort of filling, of, to a certain extent, strengthening the joints, strengthening the line; but we cannot find an instance prior to this conception of the plaintiff where the element of the cementitious filling has been contemplated not only for the purpose of making a perfect joint but as the sole reliance for the resistance of pressure—and, as the evidence tends to show, a very high degree of pressure. * * *

Now, I think that the device in question involved inventive thought of a very distinct order, because we see the gropings in the art for means to accomplish the same end here sought—the use of the hook and the bolt and the clamped ring, all those different methods, although they were employing at the same time the use of cement, but for a different purpose. No thought occurred to them, apparently, that they could depend upon the use of cement alone to accomplish the object which they were seeking. It seems to me that there can be very little question that we must accord to it the dignity of invention. I have no doubt, as intimated, as to the sufficiency of the claim in the patent, and

as I have indicated, I think it involves invention, that it involves that which is new in the art—the last step, as it has been termed. That, of course, does not mean the last step that will occur in the art, but the last step that has been exhibited in the art in the direction in which the conception points. There being no question raised as to the infringing character of the defendant's device, the decree will have to go for the plaintiff, sustaining his patent and holding the defendants for infringement; and it may provide for hearing before a Master upon the subject of any damage that may have been suffered. The usual form of decree."

The printed transcript will be referred to as "Tr."

The claim of the patent involved is as follows:

"A gate having a plate with an opening through which water may flow, a pipe having its end abutting against said plate adjacent to said opening, said plate having an outwardly projecting flange encircling the end of said pipe and forming an annular space between the end of said pipe and said flange, and a cementitious filler in said annular space securing said plate to said pipe. (Tr. p. 102, lines 77 to 85)"

Appellants' statement contained in the middle of page 4 of his brief to the effect that the invention is not to provide a novel construction, is really not literally a fair statement. It is true that plaintiff's

invention comprised a novel means for attaching a gate and valve, but according to the apparent meaning of complainant's patent it will be observed that part of the means does in fact consist of a flange which, in itself, is part of the gate or valve. As stated by witnesses, it is immaterial whether this flange is cast integral with a valve or gate, or is cast separately and afterwards made a part of a valve or gate by being bolted, riveted or otherwise attached to the gate. When so attached it becomes part of the gate or valve and as such part it is distinctly new. (Tr. pp. 60-62.)

The extracts from the testimony of the witness Martin quoted in the paragraph succeeding the paragraph referred to as occurring on page 4 of appellants' brief, would be fairer if more of the answer of the witness had been quoted. The witness said:

“Yes, but all of these patents—for instance, in the Crane, they are good examples, and in the City Water Department, and so forth, are what we describe in the art and in commerce as a gate valve; that is a by-pass valve, a valve in a continuous line, a bell end on both ends. In our patents, there must be several elements which are absent in those devices because we have a flange and opening, a pipe, cementitious filler, and a means for cutting off a water flow, and the cementitious filler comprising the means to hold the gate on, which is not the case with a

gate valve, because it remains in place in any event." (Tr. pp. 95, 96.)

Appellants' counsel is not quite correct in stating as he does in the last paragraph on page 5 of his brief, that there is no novelty in the flange. The testimony of witness Thomason referred to if fully examined will develop clearly the fact that the flange was similar in function to the flange of the original bell and spigot joint on the pipe, but there was a difference between the use of the flange to connect joints of pipe and the flange to attach a gate or valve to a pipe line. That the difference lay in this "that it was used to cement—to secure a valve TO THE END OF A PIPE." (Tr. p. 42.)

It will be observed throughout the testimony from all the witnesses and from an examination of the exhibits this difference between securing a valve or connection in a continuous line where it would be subjected merely to a disposition of the water to leak and at the end of a line where the disposition is not only leakage but also and more important where it would be subjected to the tendency of the pressure of the water to force the valve or gate off the end of the pipe.

Appellants' own expert, engineer Buckley speaking of the Hassell patent, one of their citations said:

"I don't think I would say that this joint, as

shown here, could be compared to the gate as disclosed in the plaintiff's patent, this being purely a joint in a pipe line." (Tr. p. 68.)

Mr. Kellar stated:

"The flange employed by plaintiff is different from other bell flanges in use to secure articles to pipes. It is merely a straight flange without any grooves or lugs, or anything to assist the cement to hold other than its consistency. (Tr. p. 34.)

No point was made either in the patent or in the testimony of the witnesses during the trial on the question of what mixture of cement was requisite or desirable or necessary for attaching the valve or gate to the end of the pipe. The importance of any particular mixture has apparently impressed appellants' solicitor with more vigor than it has impressed either the inventor, the patent office examiners or any of complainant's witnesses who are familiar with the use of these valves.

It might almost be suggested that the Court will take judicial notice of the law of cement reactions. Cement always mixes with water or mixes with water and sand. Almost any ratio will set into a hard similitude of rock in sufficient degree to comply with the term "cementitious filler." Any cement filler with any compound of cement and sand will

serve the purpose of fastening the valve to the pipe line. Needless to say, the thinner the mixture the less secure the valve will be. All that is required of the artisan is the exercise of some judgment in compounding his sand and his cement and his water. There is no evidence any where, and there could be no truthful testimony to the effect that any particular ratio of sand and cement is necessary to fulfill the requirements of a cementitious filler as far as this patent is concerned.

A patent is not subject to attack for uncertainty which leaves something to the skill of the persons applying the invention when sufficiently definite to guide those skilled in the art to its successful application.

Minerals Separation vs. Hyde, Ads. Ops. Oct. term 1916 p. 82, citing:

Mowry vs. Whitney, 14 Wall 620, 20 L. Ed. 860.

Ives vs. Hamilton, 92 U. S. 426, 23 L. Ed. 494.

Carnegie Steel Co, vs. Cambria Iron Company, 185 U. S. 403, 436, 437, 46 L. Ed. 968, 985, 986, 22 Sup. Ct. Rep. 698.

Appellants' contention that it was well known that a cementitious filler in connection with a flange would serve the purpose of complainant's device is very clearly negated by each and every one of ap-

pellants' references and exhibits in the case. The very first patent cited by appellants reads:

"This pipe-joint is very effective when the same is not exposed to much strain or pressure." (Tr. p. 113, lines 37-39.)

In the Galvin patent, both of the lower cuts show a flange for the insertion of a pipe and both of these flanges are grooved out to serve as a binding element. (Tr. p. 115.) And so on through each and all of the so called anticipatory exhibits.

It will be made apparent from even a cursory examination that all of the builders, patentors and artisans working the art conceived the idea prior to plaintiff's invention that a cementitious filler alone would not be sufficient to hold on a valve or gate against pressure. The inventor was the first to conceive that a cementitious filler between the pipe and the smooth flange would hold the valve and gate in place against pressure of several thousand pounds exerted against the full face of the valve, (not to the spuare inch.) (Tr. p. 47.)

As soon as plaintiff's invention was placed upon the market the device obtained a great popularity, came into common use and was imitated by defendant, who was an ex-employee of the plaintiff company who learned how to make this valve while in the employ of the plaintiff company and who in fact

sought to avoid infringement of it by changing the curve of his flange, that is by making his flange eleven sided instead of truly circular in form. (Tr. pp. 35, 36, 51.)

“The use of this invention grew pretty rapidly.” Half of plaintiff’s “business has been in this kind of a valve, or using this flange; perhaps \$50,000 worth a year.” (Mr. Thomason Tr. p 40.)

“Plaintiff employs about fifty men, has employed more when business was better. It has about an acre and a half in factory site. The manufacture of the device in question is one of their main lines. Their best year was estimated 1913 when ten or fifteen thousand of them were put out representing something like \$40,000 to \$50,000.” (Mr. Keller Tr. p. 33.)

Appellants’ solicitor inquires how the user of the Hassell and other patents on joints in pipe-lines could have failed to discover the binding qualities of cement. A reason is suggested in one of appellant’s own citations, “because laborers seldom pack the joint full” (Tr. p. 107) and there is “liability that the cement may work up into the inside of the pipe and form miniature dams against the flow” (Tr. p. 108.) The skin friction of the earth itself is sufficient to hold the pipe in place. (Tr. p. 43.)

The very fact that in all the prior devices there were other means besides the cementitious filler to

serve as an attaching means in a continuous pipe line turned away the mind of an ordinary man from the thought of using cement and a straight flange in looking for a means of attachment to the end of a pipe line. Not only would the thought not occur to a man skilled in the art but when the idea was presented to such an one he did not think it would hold.

The following is quoted from the cross-examination of defendants' witness, John Mitten, a mechanic 36 years of age who has been working for the City Water Department of Los Angeles for 10 years as a caulk, a pipe man, one having mechanical skill and the use of the common knowledge of this art:

(Tr. p. 92.) "Q. Did you ever put a valve with a flange shape like that on the end of a pipe? (Indicating device.)

A. How do you mean? This would be on the valve, do you mean?

Q. Yes, put your pipe on the inside here, have a flange in this shape.

A. No, I never did.

Q. Would you think that would hold if it were placed on the end of a pipe and filled in with cement here a half an inch thick?

Q. BY THE COURT: Do you think it would hold under pressure?

A. Well, your Honor, it would depend how much pressure would be on that pipe. There is an awful short space there for material to hold

there. Even lead I would not gamble on it holding five minutes on a joint like that.

Q. You would be afraid it would blow off?

A. I would be afraid it would blow off: that is, there is not stock enough there—

Q. I understand what you mean, there is not enough hold.

A. The majority of our bells are four inches or four and a half; that would give us four and one-half inches of cement or lead; and we can gamble on our joints; they hold pretty good.

RE-DIRECT EXAMINATION

By MR. SEVERANCE: Q. The strength of such a joint would depend upon the size of the valve and the amount of cement?

A. The amount of cement you could get in there—

Q. Beg pardon.

A. I wouldn't gamble on a joint like that. I wouldn't recommend it at all. There is not enough stock to hold it to my idea."

Plaintiff's device is not a thing which would occur to one as skilled in the art as a means to accomplish the object desired.

Mr. Thomason testified:

(Tr. p. 38.) "When we first devised this plan of securing a valve to the end of a pipe, we of-

ferred it for sale to a man engaged in pipe making. He said, 'That won't stay on'; it would be blown off by pressure; he said, 'That cement will not adhere to it, that infinitesimal amount of shrinkage will not let it go on.' I suggested it to one of the best cement men here in Los Angeles; he is here now; you would know him. He said, 'You can't secure it in that way.' I said 'I want to demonstrate that to you.' I did. And he was surprised to find an iron valve could be secured to the end of a cement pipe without any anchors or bolts or clamps, or anything of that sort. We found that none of the men engaged in the use of cement—engaged in the manufacture of pipe that believed this could be done; I have had numbers of them tell me it couldn't be done; the discovery was made rather accidentally."

Arthur S. Bent testified:

(Tr. p. 64.) "I am 53 years old; I live in Los Angeles; am a contractor in concrete construction and specialize somewhat in concrete pipe lines. I do not know as I am an expert. I have done a good deal of that sort of work. I am familiar with cement; and pipe connections—the pipe consisting of cement and the device being of metal construction, have been engaged in that line of construction twenty-five years. My recollection is that my impression at the time I first knew of plaintiff's device No. 2, it would not succeed because I thought it would blow off under

any considerable pressure. That was before I had seen it tested. My recollection of the prior devices without remembering them in detail is they were all of a sort which had the flange which could be cemented over so that the moulder made a bond over the iron. The moulder would have to be sheared to separate them, or else to have ears and lugs or devices of that sort which could be physically joined to the pipe, requiring something more than a straight lift to separate them.

Until I saw plaintiff's device, I don't remember any device where they depended upon a cementitious filler between a straight flange encircling the end of the pipe and the pipe.

CROSS-EXAMINATION

The reason I supposed the cement was not used (Tr. p. 65) in connection with the iron, was a general doubt as to its success. We always placed our ordinary slide gates with the water pressure against the gate, but since then I have often stuck a gate right on with the water pressure behind it and had it hold. Previous to some such experience as this, I would not have expected it to stay.

I don't think I ever had seen a cementitious filler used where it was required to obtain a hold upon the iron to hold it on the pipe up to the time I first saw something of this sort. I don't know whose this is, but a cap of this sort was the

first time I had seen it done. I thought that a device of this sort would blow off. The kind I was familiar with were fastened by other means, the ears and lugs—the devices that I was familiar with at that time had some protecting iron or an arrangement by which the moulder could come up over the iron so that the moulder itself would have to be sheared. It is hard for me to remember just what were in use at the time I first saw this. I remember this was new to me and I expressed some doubt as to whether it would succeed. We have used valves of various sorts for many years, the moulder fastening onto the iron in different ways, but I don't recollect anywhere there was nothing to prevent a straight lift, except the bond between the cement moulder and the iron, I don't remember any."

The fact that in the prior art so many had used other means to bind the gateplate to the pipe and to secure the joints of pipes would *mislead* the ordinary mind, would lead one away from depending on cement alone in such a combination as in plaintiff's invention. This is a consideration given weight by the courts in determining novelty.

Hartford vs. Moore, 181 Fed. 134, 135.

Potts vs. Gregor, 155 U. S. 606, 39 L. Ed. 279.

Hobbs vs. Beach, 180 U. S. 388, 45 L. Ed. 591.

In an improvement patent such as this, the ad-

vantage may reside in the ease or cheapness of manufacture.

30 Cyc. 826.

A very important element and one which makes the patent commercially valuable is the "outwardly projecting flange encircling the end of said pipe and forming an annular space between the end of said pipe and said flange." (Tr. p. 102, lines 80-83.)

Mr. Thomason says that there was no bead on the outer flange, none on this at all.

"This really—this has a little bit of flare to it. The flare is merely to enable the moulder in the foundry to draw it out of the sand. The flare on the outer flange has this effect on the ease and cheapness of manufacture, we don't have to use any core, only just the green sand proposition." (Tr. p. 43.)

This form of construction of the flange without grooves, beads or projections of any kind to hinder its being drawn out of the sand obviating the necessity of the use of any core, is the same in defendants' commercial device.

Defendants' counsel cites on page 11 of his opening brief the patents to Hassell, Worley, Jackson, and Wakefield as showing "examples of a cement filler alone relied upon to make a joint and hold the two pieces in position with respect to each other."

That is not true. Cement alone is not relied upon in any of these patents. There were always other means.

Defendants' expert Mr. Buckley testifies:

HASSELL PATENT NO. 318,616:

(Tr. p. 68.) "There is disclosed here what is plainly a bell and spigot connection with some novelty of filling, that is the only thing I see in this. * * *

I don't think I would say that this joint, as shown here, could be compared to the gate as disclosed in the plaintiff's patent, this being purely a joint in a pipe line."

ON CROSS-EXAMINATION

(Tr. p. 81.) "Q. You stated on your direct examination that the elements of the Hassall claim, Exhibit "B", were a flange face and a filler. What other elements do you find beside the above in the patent?

A. I find two concentric rings described in the specification * * *."

(Tr. p. 82.) In the specification as to whether the pipe joint is adapted to withstand pressure: it is stated, "This pipe joint is very effective when not exposed to too much strain or pressure."

(Tr. p. 83.) Exhibit I, the WORLEY patent, on Line 16 refers to the water flowing into the

pipes, and Line 34 shows that the device is to be placed on the inside wall of a ditch, and Line 75 reads, “* * * so as to prevent water from flowing into the collar from the ditch or other source of supply.” It seems very plain that the device is intended to receive water from the irrigating ditch.

Q. BY THE COURT: Well, it says, “this luting may also embed the posts 11 and 12 thus permanently securing the collar in the end of the concrete pipe.” (Tr. p. 84.) What is meant by the term “luting?”

MR. MONTGOMERY: Luting is an adhesive substance.

A. Claim 3. These wire members are described as being bent to form clamping limbs, and the luting is described as embedding a portion of said wire members to retain the collar in place.

This patent in general is somewhat similar in its method of permanently securing the collar to the end of the concrete pipe, to the method as employed by Mr. Kellar that was described yesterday, where a collar with a bead around the bottom was placed on the inside of a pipe.”

The witness here refers to a first device of plaintiff that was not successful. (Tr. p. 55.)

(Tr. p. 83.) In exhibit H, the JACKSON patent, the purpose of the lugs in this device is primarily to center the spigot end in the bell.

In 63, it says, “The lugs C also are provided

with a pocket F for retaining a packing of hemp G and for allowing the cement H to flow in around the spigot end of the pipe section to firmly hold the same in the socket."

This patent is significant in connection with the patent in suit, to a limited extent only, showing the use of a cement filler in a bell and spigot joint.

(Tr. p. 82.) Exhibit F, the WAKEFIELD patent, I consider (Tr. p. 83.) only significant in connection with the patent in suit, in illustrating one form of bell and spigot joint. There is a mechanical lock indicated in this, independent of the filling material."

(Tr. p. 74.) "THE WAKEFIELD patent has certain structural peculiarities. It appears that the bell end, as shown on this pipe, is provided with a broken annular groove in one side forming a lock for the spigot end—a mechanical lock."

Reference is made in Appellants' Opening Brief page 7 to the Seitz patent as showing anticipation.

In this appellants' counsel does not seem to agree with appellants' expert, Mr. Buckley, who said:

(Tr. p. 83.) "Exhibit 'G', the Seitz patent, according to the specification, the gate is not intended to retain water in the pipe it is intended to resist the entry of water into the pipe. The binding element consists of four bolts."

(Tr. p. 76.) BY THE COURT: The specifica-

tions here call for—cement or other suitable packing material. I would hardly say, from the specification and the claim here, that the so-called packing material was intended as a holding devise.

THE WITNESS: I think that inference is the one that I did, myself, make. It is to make, undoubtedly, a tight joint.

In fact, in 55 he has specified cement or other suitable packing material for the purpose of making a water tight joint; hence, he apparently relies on the bolts for strength.

(Tr. p. 72.) THE COURT: Yes, it would indicate that it must have been.

Q. BY MR. SEVERANCE: Would the cementitious filler and water tight connection have had any degree of holding effect upon the parts most in need?

A. It might easily be quite sufficient for the purpose, although not anticipated by the inventor.

As to the Buttorff patent referred to in appellants' Opening Brief page 12, defendants' expert Mr. Buckley testified:

(Tr. p. 84.) "Q. Exhibit 'J' I believe is the Buttorff patent. Is this gate designed to retain water in the pipe, or to receive it from a ditch or canal?"

A. I think it would perform either function.

Q. What was it designed for? What was the patent claimed for?

A. I find in 15, 'My invention relates, generally speaking, to improvements in flood gates, adapted to control the flow of water from an irrigating ditch or canal to a lateral or branch ditch which supplies the consumer with a pre-determined quantity of water.'

THE COURT: This really is in the nature of a measuring gate.

A. That is practically what it is."

Previously he had testified as follows:

(Tr. p. 73.) "There is an additional element in the Buttorff patent in the bolts which connect the plate, having a rearwardly projecting flange to the pipe. These bolts extend from inwardly projecting lugs in the annular space between the pipe and the interior of the flange, and other lugs attached to the pipe itself.

Q. (By the COURT.) They perform apparently a similiar function to that found in the Seitz patent?

A. I don't think so, your Honor, because the structure of this plate and the attached or integral flange, together with the character of pipe that is shown, would in itself be such that if the annular space were filled with cement it would be impossible to remove the gate from the end of such a pipe. My impression would be merely to hold the gate in place while the ce-

ment was being put in place, my impression being based on the obvious fact that such a cement filling would provide a connection of very great strength.

By the COURT: I couldn't concur in that construction (Tr. p. 74.) for a mere temporary purpose such as would be subserved by holding it in place. I would be inclined to say they were intended for strength in the annular filling there for a tight joint.

A. It may have been the inventor's intention, Your Honor."

(Tr. p. 78.) "By the COURT: The witness gave it as his judgment yesterday, in referring to this particular device, that that bolt connection was made for temporary stay while the cement was setting.

MR. SEVERANCE: Yes that was suggested.

The COURT: In that I couldn't agree with him.

MR. SEVERANCE: You couldn't? Well, possibly not—

The COURT: Because I do not think that the general structure, and for the very reasons that have been suggested by the witness himself, that would call for any necessity for a temporary stay; I think they were intended for additional strength.

The WITNESS: They may have been so in-

tended by the inventor. I merely expressed the opinion, however, that they were wholly unnecessary in view of the excessive strength of such a joint."

Appellants' counsel suggests that any one having to disconnect the Buttonoff headgate from a line would have it brought to his attention that the cement filler would adhere to both these metal parts and must be chipped off in order to remove the gate. That is not probable because of the peculiar construction of the Buttonoff flange forming, as the defendants' expert says, a mechanical lock. To break cement locked behind a slanting flange would not suggest that there would be sufficient strength in the cement alone to hold a straight flange against water pressure.

There is considerable testimony in the transcript as to plaintiff's unsuccessful efforts to accomplish the result which has been accomplished by the device covered by the patent in suit, (Mr. Thomason, Tr. p. 40, Mr. Martin, Tr. pp. 55, 56) and as to the study and experimenting done by the inventor and his associate before as he says he developed something he "felt like was worth patenting, and made application and secured one patent as referred to here, the one we have before us. * * * and all these years I have been studying and experimenting in different ways along that line." (Tr. p. 30.)

In Gandy vs. Main Belting Co., 143 U. S. 586, 36 Law. Ed. 276 the court says:

“In view of the fact that previous attempts, of which there appear to have been several, to make a practical canvas belt had been failures, and that Gandy had been experimenting with the subject for several years before he discovered that a change was necessary in the structure of the canvas itself, we do not think his improvement is a change in degree only, or such an one as would have occurred to an ordinary mechanic, and our opinion is that it does involve an exercise of the inventive faculty. The change is such as would only have occurred to one familiar, not alone with the impossibility of making a practical belt out of the ordinary canvas, but to one who had bestowed considerable thought upon the method of overcoming the difficulty.”

There was a demand for some contrivance which, without clamps, bands, collars, anchor bolts, eye-bolts, lag bolts, plain bolts, nuts, screws, lugs, ears, beads, grooves or other means, without reducing the size of the pipe, would attach an irrigating valve or gate to the end of a stand-pipe in the field and thus control the flow of water in irrigation and as a hydrant.

Mr. Keller says there was a demand for something to secure these gates to the end of the pipe. Many

times the latter ended at a street, and it was desired —or at a arroyo, or ravine or something like that where they wanted to drain out the pipe. (Tr. p. 31.)

Mr. Thomason stated:

(Tr. p. 40.) “There was a demand for such a thing. It was necessary to have some means of closing the pipe end of a stand-pipe in a field to shut the water off, and then it could be used to open it to let it flow again, and we used the other kinds of valves I have just described, but it gave a great deal of trouble, in being forced off by water pressure, in being on end in that manner, so there was a good deal of demand.”

Mr. Martin stated:

(Tr. p. 52.) “It should be understood that when farmers and ranchers commence to irrigate by underground (Tr. p. 53) pipe systems, there grew a need for some devices which had never before existed in any art. Hydrants and water distributing means were quite old, but were expensive. For instance, this valve, which weights, say 22 pounds now sells for about \$5. That, to the consumer the requirement was for a cheap appliance, easy to attach, which did not require a plumber nor an expert to fasten onto a system, and which at the same time would enable the rancher to control the flow of water.”

Supplying a long felt want tends to establish the invention as novel. 30 Cyc. 862.

The testimony of Messrs, Thomason, Martin and Bent, men whose business and experience were adapted to bring to them a knowledge of all improvements therein, that no such improvement as covered by the patent had come to their knowledge is evidence of its novelty. 30 Cyc. 843.

Mr. Thomason testified:

(Tr. p. 40.) "Prior to this invention there was nothing so far as anything previously used was concerned, that suggested to me as a practical manufacturer that this flange could be put on the outside, encircling the end of the pipe, with an annular space between, and held there by a cementitious filler. We had never seen anything like this up to the time we used it."

Mr. Bent testified:

(Tr. p. 64.) "Until I saw plaintiff's device I don't remember any device where they depended upon a cementitious filler between a straight flange encircling the end of the pipe and the pipe."

Mr. Martin testified:

(Tr. p. 58.) "Q. BY THE COURT: I would like to ask the witness a question. I don't think you testified, you have stated your familiarity with the prior art for a considerable number of years,—what have you to say with reference to

the plaintiff's device as being the first application of the principle embodied there (Tr. p. 59) in the art of holding the valve or gate in the position that his patent calls for.

A. I have examined all of the patents in the Patent Office on this art of valves and gates, numbering something like six thousand. I think I have had and looked over every patent in any water distributing system, and as far as I know, this is the first, and until plaintiff's use, the only use that I have ever seen or ever heard of, either in the patented art or in the prior art, where a cementitious filler alone was depended on to hold a gate or valve on the end of a pipe under the water presure, or in any other art."

ON CROSS EXAMINATION.

(Tr. p. 60.) "Where this flange and annular space and cementitious filler are used with a plate, they are absolutely new; where they are used in continuation of a pipe line, they are not new, because I have seen pipe lines in Pompeii that have been there thousands of years. That plate has a very important function, because that plate is what holds the head of the water. Where you have just the flange ring, or the flange and the spigot end in a continuous pipe line, you don't have any head of water against it. Where you have a plate you do have a head of water."

Mr. Buckley, defendants' expert, said on recross-examination:

(Tr. p. 88.) "I don't remember having seen a concrete pipe with a metal flange connected by means of a cementitious filler alone before the patent in suit."

In view of the new and additional use of an old element and the elimination in plaintiff's device of all other means of attachment except the straight flange and cementitious filler, and in view of the simplicity of the present device, its ease and economy of manufacture, its cheapness to the consumer, resulting from study and experiments, some of them unsuccessful, an improvement not known or conceived of by those who were likely to know, and filling a long felt want, we have here what the Court spoke of as a device involving "inventive thought of a very distinct order * * * the last step as it has been termed."

The decree should be affirmed.

Respectfully submitted,

CHARLES C. MONTGOMERY

Solicitor for Appellee.